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APPLICATION FOR LETTERS PATENT FOR:

CONFINEMENT FENCE STRUCTURE FOR CLIMBING ANIMALS AND ITS
ASSOCIATED METHODS OF CONSTRUCTION AND INSTALLATION

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**CONFINEMENT FENCE STRUCTURE FOR CLIMBING ANIMALS AND
ITS ASSOCIATED METHODS OF CONSTRUCTION AND
INSTALLATION**

5 **BACKGROUND OF THE INVENTION**

1. Field Of The Invention

In general, the present invention relates to fence structures for confining animals. More particularly, the present invention relates to fence structures with features that prevent climbing animals, such as cats, from climbing over the fence structure.

2. Description Of The Related Art

15 Many households have pets. In the United States, two of the most common household pets are dogs and cats. No two pets have the same personalities. Some pets can be trained to live outside and not wanderers away from a home or near a street. Other pets are wanders and will readily get lost if they are left outside and unrestrained.

20 Dogs are poor climbers, thus any fence that a dog cannot jump over or dig under is typically sufficient to contain a dog within a confined area. However, cats are natural climbers. They also are very adept at

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leaping. Thus, in order to confine a cat within fenced area, either a fence has to be constructed that is abnormally high, or some feature has to be added to the fence that deters a cat from climbing over the fence.

In the prior art, there are different types of fences that contain some feature that is intended to prevent the fence from being climbed. Many fences, especially barbed wire fences, have extra runs of barbed wire at the top of the fence to deter people from climbing the fence. Such barbed wire fences are exemplified by U.S. Patent No, 2,015,615 to Caplinger, entitled Fence Guard. However, very few people want to have barbed-wire fences in their backyards to confine their pets. Thus, features have been added to more conventional types of backyard fences that deter the fences from being climbed.

U.S. Patent No. 6,199,831 to Patrick, entitled Non-Electric Perimeter Fence, discloses a fence structure where angled solid panels are attached to the top of a chain link fence. The supports for the fence must be significant to support the weight of the angled panels and the wind loads experience by the angled panels. Furthermore, a lot of material is

needed to create the angled solid panels. As such, the entire fence assembly is expensive to manufacture and difficult to install. Additionally, the angled solid panels are disposed at the top of the fence. As a
5 consequence, the entire fence assembly is highly visible and blocks the view of whatever may lie beyond the fence.

U.S. Patent No. 5,267,724 to Heath, entitled Fencing Apparatus For Containing Cats, discloses a
10 wire shelf that can be attached to the back of an existing wooden fence. The wire shelf extends horizontally from the fence and therefore acts as a physical barrier to any cat climbing up the fence. However, in order for the Heath fence barrier to be
15 used, a solid wooded fence must first be constructed around the periphery of the area in which the cat is to be confined. Building a solid wood fence is both expensive and obtrusive in that the wooden fence is a physical barrier that blocks the view of what lay
20 behind the fence.

A need therefore exists in the art for a fencing system that can be used to confine a climbing animal, where the fencing system is low cost, easy to install and does not block the view of what lay beyond the

fence. This need is met by the present invention as described and claimed below.

SUMMARY OF THE INVENTION

5 The present invention is a fencing system for confining climbing animals, such as cats. The fencing system uses a plurality of vertical posts that are set in place along a desired fence line. Canopy support brackets are provided that attach to the vertical
10 posts. Each canopy support bracket has an ascending section that climbs to an apex point and a descending section that descends from that apex point. The vertical posts and the canopy support brackets create the rigid supports for the fencing system.

15 Flexible netting is suspended between the rigid supports that are created by the vertical posts and the canopy support brackets. The flexible netting is supported vertically by the vertical posts. Above the vertical posts, the flexible netting is supported in
20 an ascending angle to an apex point by each ascending section of the canopy support brackets. From the apex point, the flexible netting is supported in a descending angle at the free end of the canopy support bracket by the descending section.

The result is a fence system that cannot be climbed by a pet, yet is nearly transparent. Furthermore, the fence system is inexpensive and easy to install.

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BRIEF DESCRIPTION OF THE DRAWINGS

For a better understanding of the present invention, reference is made to the following description of exemplary embodiments thereof,
10 considered in conjunction with the accompanying drawings, in which:

FIG. 1 is a perspective view of a sampling of the components that create one embodiment of the present
15 invention fence system;

FIG. 2 is a perspective view of a first method step in the installation of the present invention fencing system;

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FIG. 3 is a perspective view of a second method step in the installation of the present invention fencing system;

FIG. 4 is a perspective view of a third method step in the installation of the present invention fencing system;

5 FIG. 5 is a side view of an alternate mounting system for the vertical posts of the present invention fencing system.

10 DETAILED DESCRIPTION OF THE DRAWINGS

Although the present invention fence system can be used to confine any non-flying household pet, such as a dog, it is particularly designed to confine climbing pets, such as cats. Accordingly, when
15 describing the purpose of design for the present invention fence system, it will be described as being used to confine a cat. This is done to present the best mode of use anticipated for the invention.

Referring to Fig. 1, there is shown a sampling of
20 the components that are the present invention fence system 10. The number of components used in the fence system 10 is directly proportional to the length of the fence to be erected. Included within the fence system 10 are a plurality of ground anchor sleeves 12,

vertical posts 14, canopy support brackets 16, flexible netting 18, guard mesh 20, stakes 22 and cable ties 24. The purpose and assembly of these components is described below.

5 To utilize the fence system 10, a person must first lay out the periphery of where the fence is to be constructed. At the corners of that fence layout and at various points along the fence layout, a person drives ground anchor sleeves 12 into the ground.

10 Referring to Fig. 2 in conjunction with Fig.1, it can be seen that the ground anchor sleeves 12 are tubular structures having one open end 26 and one closed end 28. The closed end 28 is pointed to help the ground anchor sleeve 12 be driven into the ground. The
15 length of the ground anchor sleeve 12 can vary depending on the height of the fence being erected and the ground type. Preferably, the ground anchor sleeves 12 are between ten inches and thirty inches in length.

20 The ground anchor sleeves 12 are driven into the ground at periodic points along the length of the fence line. A ground anchor sleeve 12 is driven into the ground at all corners of the fence line and at evenly spaced intervals in between those corners. The space in between adjacent ground anchor sleeves 12 is

preferably between eight feet and sixteen feet. A cap element 30 can be provided that fits over the open end 26 of the ground anchor sleeve 12. The cap element 30 protects the open end 26 from being damaged when the ground anchor sleeve 12 is driven into the ground by a sledgehammer.

Referring to Fig. 3, in conjunction with Fig. 1, it can be seen that after the ground anchor sleeves 12 are driven into the ground, the vertical posts 14 are set into the open end 26 of the ground anchor sleeves 12. The vertical posts 14 are supported in the vertical plane by the ground anchor sleeves 12. The vertical posts 14 extend above the ground anchor sleeves 12 by a height of between two feet and eight feet, with the preferred height being between three feet and seven feet.

Each vertical post has a top end 32 and a bottom end 34. The bottom ends 34 of the vertical posts 14 are received by the ground anchor sleeves 12. The top end 32 of each vertical post 14 can be either open or closed. Each of the canopy support brackets 16 has a stem section 36 that passes around the top end 32 of a vertical post 14. A set screw is present in the stem section 36 so the canopy support bracket 16 can be

locked in place atop the vertical posts 14. As such,
the canopy support brackets 16 extend above the
vertical posts 14. Each canopy support bracket 16 has
an ascending section 38 and a descending section 39.
5 The ascending section 38 extends upwardly to an apex
point 40 from the stem section 36. The ascending
section 38 creates an angle A with the vertical plane
of between thirty degrees and sixty degrees.

The descending section 39 extends downwardly from
10 the apex point 40 of the ascending section 38 at close
to a right angle. The descending section 39 preferably
has a length of no more than half the length of the
ascending section 38. Mounts 42, in the form of holes
or clips, are optionally formed along the length of
15 both the ascending section 38 and the descending
section 39. These mounts 42 are used to connect the
flexible netting 18 to the canopy support brackets 16
as will later be explained.

Referring to Fig. 1 in conjunction with Fig. 4,
20 it can be seen that the vertical posts 14 and the
canopy support brackets 16 form the supports of the
fence. The flexible netting 18 is rolled across the
vertical posts 14 and the canopy support brackets 16.
The flexible netting 18 is preferably a fine synthetic

netting comprised of netting filaments of less than 0.10 inches. The net openings defined by the intersecting netting filaments are preferably between one inch square and three inches square. The flexible netting 18 is lightweight and is preferably a dark color such as black or green. Accordingly, when the flexible netting 18 is suspended across the vertical posts 14 and the canopy support brackets 16, the actual material of the flexible netting 18 is difficult to see. The flexible netting 18 therefore appears to be absent because of its dark coloring and the large disparity between the netting holes of the flexible netting 18 and the small diameter filaments that define those netting holes. Accordingly, the structure of the fence provides very little visual obstruction to objects behind the fence.

The flexible netting 18 is attached to the vertical posts 14 and the canopy support brackets 16 with the use of common cable ties 24. The cable ties 24 wrap around the vertical posts 14 and the canopy support brackets 16 and pass through the mesh of the flexible netting 18. The cable ties 24 can be advanced through mounts 42 present on the canopy support brackets 16 to ensure the cable ties 24 do not move

out of place. The use of cable ties 24 is only exemplary and it will be understood that other kinds of binding connectors, such as wrapped wire, tape or string ties can also be used.

5 Since the flexible netting 18 is so fine, it is possible that an animal can tear or gnaw through the flexible netting 18 and create a hole in the flexible netting 18. A roll of guard mesh 20 is provided. The guard mesh 20 is preferably a metal mesh coated in
10 vinyl or another protective coating. The guard mesh 20 is preferably the same dark color as the flexible netting 18. The guard mesh 20 is rolled along the fence, wherein the guard mesh 20 overlaps the bottom of the flexible netting 18 by a few inches. The guard
15 mesh 20 is also bent so that it runs along the ground in front of the flexible netting 18. The guard mesh 20 is anchored to the ground with the ground stakes 22. The top edge of the guard mesh 20 is attached to the vertical posts 14 and to the flexible netting 18 with
20 cable ties 24 or similar binding connectors. The presence of the guard mesh 20 prevents animals from ripping the bottom of the flexible netting 18 or digging under the flexible netting 18.

Once fully assembled, the fence system 10 provides multiple deterrents to a climbing animal. First, the fine mesh of the flexible netting 18 is hard to see. Thus, it is an unsure target when leaped upon. Animals, such as cats, tend only to leap onto surfaces that they can clearly see. Furthermore, if a climbing animal were to climb up onto the flexible netting 18, the animal would feel that the flexible netting 18 is not rigid, but rather it would sag and sway with the weight of the animal. This would give a climbing animal the sense that they were about to fall, which would cause the animal to leap back to the ground.

Even if an animal did climb to the apex point 40 of the flexible netting 18, the animal would have to climb downward and upside down to climb under and around the flexible netting 18 supported by the canopy support bracket 16. It is far more likely that a determined climber would fall back to the ground than be able to successfully complete such a climbing maneuver.

Thus, the present invention fence system 10 provides a fence that is low cost, easy to install, inexpensive and visually unobtrusive. Yet the present

invention fence system provides a formidable barrier to all climbing pets, such as cats.

In the present invention, ground anchor sleeves 12 are driven into the ground to support the vertical fence posts 14. However, in ground next to trees, the ground may be gnarled with roots that make the insertion of the ground anchor sleeves 12 difficult. Furthermore, a desired fence path may pass over a paved section of a person's backyard that is also poorly suited for the use of the ground anchor sleeves 12.

Referring to Fig. 5 an alternate mounting system is shown for the vertical fence posts 14 that can be used when the ground is unsuitable for a ground anchor sleeve. In the embodiment of Fig. 5, eyebolts 50 are set into a preexisting object 52. Although the shown preexisting object is a tree, it will be understood that the preexisting object can be another fence, a house wall, a clothesline pole or the like. The eyebolts 50 are set into the preexisting object 52 in a vertical alignment.

Once the eyebolts 50 are set into the preexisting object, a vertical post 14 is advanced through the eyebolts 50 and is locked into place with a cable

ties. A canopy support bracket 16 is then attached to the vertical post 14. The flexible netting 18 and chew guard mesh 20 are then applied in the manner previously described.

5 It will be understood that the embodiments of the present invention fencing system illustrated and described are merely exemplary and that a person skilled in the art can make many variations and modifications to the shown elements. For example, in
10 the shown embodiment, the canopy support brackets have straight ascending arms and straight descending arms. Such a configuration can be replaced with a curved canopy support bracket that has an ascending section and a descending section. Furthermore, there are many
15 connector systems that can be used to interconnect the canopy support bracket with the vertical post and the vertical post with the ground anchor sleeve. All such variations, modifications and alternate embodiments are intended to be included within the scope of the
20 present invention as claimed.